

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

TITLE V PERMIT NO. V-03-005 REVISION 1

BEREA COLLEGE

Rustic Road CPO 2337, BERE, KENTUCKY

FEBRUARY 2, 2005

BEN MARKIN, REVIEWER

SOURCE I.D. #: 021-151-00006

SOURCE A.I. #: 39053

ACTIVITY #: 50703

CHANGES TO PERMIT (REVISION 1):-MINOR MODIFICATION:-

The Division on December 12, 2004 received a minor modification application for Berea College. The application is for construction of a fifty (50) mmBtu/hr natural gas fired auxiliary boiler (EU 05) to replace the two existing coal fired boilers [emission units 01 and 02], which have been decommissioned due to some mechanical deficiencies. Emission unit 01 has not been operational for number of years and is unlikely to be placed back into service, and emission unit 02 was taken out of service on April 14, 2004. For either of these decommissioned units (01 and 02) to operate, they would have to demonstrate compliance with the requirements of 401 KAR 50:015 and 401 KAR 50:016, and submit a request to operate to the Division for approval. The addition of the boiler does not trigger a prevention of significant deterioration (PSD) review for the facility, nor is it a significant modification under Title I of the Clean Air Act. In accordance with 40 CFR 52.21 and 401 KAR 51:005, the maximum potential emissions for all regulated pollutants from the proposed unit were calculated based on 8760 hours per year. Based on the evaluation, the future projected and the maximum potential emissions of the PSD regulated pollutants are below the Significant Emission Rate (SER) [401 KAR 51:001, Section 1(222)(a). Hazardous air pollutants (HAP) emissions from the unit are less than ten tons per year for a single and twenty-five tons per year for combined

Applicable Regulations to the new unit –EU 05

401 KAR 59:015, new indirect heat exchangers applicable to an emissions unit with a capacity less than 250 mmBtu/hour, which commenced construction after April 9, 1972.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to a steam generating unit with a capacity of less than 100 mmBtu/hr but greater than 10 mmBtu/hr which commenced on or after June 9, 1989.

The proposed auxiliary boiler will not be subject to the new maximum achievable control technology (MACT40) CFR 63, Subpart DDDDD, because the source is not major for HAP.

The coal-handling units listed under insignificant activities shall not be used or operated until the coal-fired boilers have been tested and are in compliance.

SOURCE DESCRIPTION:

Berea College, located in Madison County, has applied for an operating permit for the operation of Indirect Heat Exchangers and Wood Surface Coating at their campus facilities. The College has two coal-fired boilers rated at 107.7 mmBtu/hr, and 71.8 mmBtu/hr respectively. A 52.4

mmBtu/hr Natural Gas unit is also located on the campus. Additionally, there is a surface coating operation, which applies lacquer and sealer to furniture. This initial source-wide TV permit will supersede the existing operating permit # O-84-142.

COMMENTS:

I. Type of controls

Coal boilers 1 and 2 are equipped with multiple cyclone separators with efficiencies of 92 and 95 percent respectively. The surface coating operation uses exhaust filters for particulate control.

Emission factors

Emission factors were obtained from AP-42 and Material Safety Data Sheets.

III. Applicable regulations

The coal boilers are regulated by 401 KAR 61:015. Regulation 401 KAR 59:015 applies to the natural gas boiler. The surface coating operation is regulated by 401 KAR 59:010.

IV. Periodic Monitoring

The source will monitor fuel usage and surface coating operation throughputs.

CREDIBLE EVIDENCE:

This permit contains provisions, which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.